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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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23596 7590 04/06/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
EXAMINER HEIDER, SHANTELL LAKETA				
ART UNIT		PAPER NUMBER		
2617				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/786,795

Applicant(s)

VANGHI ET AL.

Examiner

SHANTELL HEIBER

Art Unit

2617

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date 9/26/05 and 3/16/09
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on December 30, 2008 have been fully considered but they are not persuasive.
2. The applicant argues that ***Kim does not teach or suggest "determining pilot acquisition for the list of frequencies and additional frequencies not included in the list of frequencies to produce a search result; [and] acquiring synchronization and timing for each cell for which pilot acquisition is determined"***. The examiner respectfully disagrees.
3. Lee discloses a procedure that the mobile station operating in an async system **(first radio access technology from 3rd Generation Partnership Project, 3GPP)** acquires the timing (acquire synchronization and timing) of a sync system **(second radio access technology from 3rd Generation Partnership Project 2, 3GPP2)** and then performs handoff to the sync system. The mobile station receives a message including information about the adjacent base stations from the async base station through a broadcast channel. The async base station sends to the mobile station information about the adjacent sync base stations together with the pilot offset PILOT OFFSET and the frequency band of the individual sync base stations (search message carrying a list of frequencies to search for cells in the second wireless network). The mobile station measures the strengths of the pilot signals from the adjacent base stations using the received information **(determine pilot acquisition for the list of frequencies)** about the adjacent base stations and sends a message

including the measured strengths of the pilot signals to the async base station through the reverse dedicated channel periodically or by request. See Col. 13, lines 20-53 and Col. 14, lines 4-26.

4. Although Lee discloses determining pilot acquisition for the list of frequencies as described above, Lee fails to disclose determining pilot acquisition for additional frequencies not included in the list of frequencies. However, Kim discloses determining pilot acquisition for additional frequencies not included in the list of frequencies. Kim discloses information on a frequency assignment of the neighboring base stations and a list of the neighboring base stations is transmitted by the current base station to a mobile telephone over a current channel of the mobile telephone. The mobile telephone detects a pilot signal from one of the neighboring base stations. The mobile telephone determines whether the detected neighboring base station is included in the list of the neighboring base stations. If the detected neighboring base station is not included in the list of the neighboring base stations checked, then the mobile recognizes the handoff as failed (**determining pilot acquisition for additional frequencies not included in the list of frequencies**). See paragraphs [0059]-[0062].

5. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a

reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

6. Therefore, the combination of Lee and Kim disclose "determining pilot acquisition for the list of frequencies and additional frequencies not included in the list of frequencies to produce a search result; [and] acquiring synchronization and timing for each cell for which pilot acquisition is determined" as claimed in applicant's independent claims 1, 13, 15, 17, 18, 27, 29 and 33.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7-13, 15, 18, 21-27 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (Lee), U.S. Patent No. 7,130,284 in view of Kim et al. (Kim), U.S. Publication No. 2001/0016493

Regarding Claims 1, 13, 15, 18, 27 and 29, Lee discloses a wireless device, a method and apparatus operable to communicate with first and second wireless communication networks of different radio access technologies, comprising: a first modem processor (**first baseband processor 403**) operative to perform processing for a pending call with the first wireless network implementing a first radio access

technology from 3rd Generation Partnership Project (3GPP) (**async mobile communication system**), receive a first message from the first wireless network to perform handoff to the second wireless network, receive a search message carrying a list of frequencies to search for cells in the second wireless network, and provide notification of the handoff; and a second modem processor (**second baseband processor 406**) operative to determine pilot acquisition for the list of frequencies and to produce a search result, acquire synchronization and timing for each cell for which pilot acquisition is determined, exchange a second message with the second wireless network implementing a second radio access technology from 3rd Generation Partnership Project 2 (3GPP2) (**sync mobile communication system**) to establish a new call with the second wireless network, perform a call setup procedure with the second wireless network to establish the new call, and perform processing for the new call with the second wireless network (**Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17**).

Lee fails to disclose determine pilot acquisition for additional frequencies not included in the list of frequencies.

In a similar field of endeavor, Kim discloses a method and apparatus for idle handoff in a cellular system. Kim further discloses determine pilot acquisition for additional frequencies not included in the list of frequencies (**a list of neighboring base stations is transmitted by the current base station to a mobile telephone, the mobile telephone detects a pilot signal from one of the neighboring base stations and determines whether the detected neighboring base station is**

included in the list of the neighboring base stations; [0059]-[0062]; [0071]; [0072]; [0080] and [0081]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to measure the strengths of the pilot signals from the candidate cells in a short time (Lee-Col. 14, lines 38-41) for maintaining the continuity of the transmission traffic (Kim-[0003] and [0004]).

Regarding Claims 2 and 18, Lee discloses further comprising: an application processor operative to receive the notification from the first modem processor, direct the second modem processor to establish the new call, and direct the first modem processor to release the pending call **(Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17).**

Regarding Claim 3, Lee discloses wherein the application processor is operative to direct the first modem processor to release the pending call concurrently with the establishment of the new call or shortly after the new call has been established to minimize disruption of service **(Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17).**

Regarding Claim 7, Lee discloses wherein the pending and new calls are voice calls **(Col. 1, lines 38-50).**

Regarding Claim 8, Lee discloses wherein the first modem processor is operative to maintain a first protocol stack for communication with the first wireless network and the second modem processor is operative to maintain a second protocol

stack for communication with the second wireless network (**Col. 9, line 62-Col. 10, line 39**).

Regarding Claim 9, Lee discloses wherein the second modem processor is operative to perform pilot re-acquisition and cell search, as necessary, obtain updated system information, and perform system access for the second wireless network to establish the new call (**Col. 14, line 51-Col. 15, line 17**).

Regarding Claim 10, Lee discloses wherein the wireless device is operable to communicate with the first and second wireless networks simultaneously (**Col. 14, line 51-Col. 15, line 46**).

Regarding Claim 11, Lee discloses wherein the handoff is triggered by the first wireless network based on measurements obtained by the wireless device (**Col. 14, lines 51-61**).

Regarding Claim 12, Lee discloses wherein the handoff is triggered by the first wireless network based on location information for the wireless device (**Col. 13, lines 27-30**).

Regarding Claim 21, Lee discloses wherein the first message from the first wireless network includes information for one or more target cells in the second wireless network to which the wireless device is handed off (**Col. 13, lines 27-39 and Col. 14, line 51-Col. 15, line 17**).

Regarding Claim 22, Lee discloses wherein the one or more target cells are

determined by the first wireless network based on search results from the second modem processor for a list of frequencies in the second wireless network (**see rejection for claim 21**).

Regarding Claim 23, Lee discloses wherein the second modem processor is further operative to send a second message to the second wireless network indicating successful completion of the handoff to the second wireless network **Col. 14, line 51-Col. 15, line 17**).

Regarding Claim 24, Lee discloses wherein the first modem processor is operative to autonomously terminate the pending call with the first wireless network after providing the notification of the handoff **Col. 14, line 51-Col. 15, line 17**).

Regarding Claim 25, Lee discloses wherein the application processor is further operative to direct the first modem processor to terminate the pending call with the first wireless network (**see rejection for claim 24**).

Regarding Claim 26, Lee discloses wherein the first wireless network terminates the pending call based on signaling between the first and second wireless networks (**see rejection for claim 24**).

Regarding Claim 30, Lee discloses wherein the first and second modem processors independently perform processing for the first and second wireless networks, respectively (**Col. 9, line 62-Col. 10, line 39 and Figure 4**).

Regarding Claim 31, Lee discloses wherein the first and second modem processors support concurrent with the first and second wireless networks (**Col. 9, line 62-Col. 10, line 39 and Figure 4**).

Regarding Claim 32, Lee discloses wherein the first and second modem processors are implemented with separate processors (**Col. 9, line 62-Col. 10, line 39 and Figure 4**).

7. Claims 4, 14, 16, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Kim in view of Singh et al. (Singh), U.S. Publication No 2003/0139184.

Regarding Claims 4, 14, 16, 19 and 28, Lee and Kim disclose the wireless device, a method and apparatus wherein the second radio access technology is IS-2000 (**Lee-Col. 1, lines 25-30**) as described above.

Lee and Kim fail to disclose wherein the first radio access technology is Wideband Code Division Multiple Access (W-CDMA).

In a similar field of endeavor, Singh discloses a method for performing inter system handovers in mobile telecommunication system. Singh further discloses wherein the first wireless network implements Wideband Code Division Multiple Access (W-CDMA) **[0024], [0026] and [0028]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network **[Singh-0007]** where the regions are two systems that are

becoming harmonized and there is a need for various technologies that are compatible with both systems relating to handoff (Lee-Col. 1, lines 32-37).

7. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Kim in view of Patel et al. (Patel), U.S. Publication No. 2004/0203469.

Regarding Claim 5, Lee and Kim disclose the wireless device wherein the second modem processor is operative to perform a mobile terminated (MT) call setup procedure defined by IS-2000 (**Lee-Col. 1, lines 25-30 and Col. 14, line 51-Col. 15, line 17**) as described above.

Lee and Kim fail to disclose wherein the message is a General Page Message sent by the wireless network.

In a similar field of endeavor, Patel discloses a method of reducing latency for non-call delivery paging. Patel further discloses the message is a General Page Message sent by the wireless network **[0022]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a well-known format of a general page message according to TIA/EIA IS-2000 [Patel-0022] in a mobile communication system operating in accordance with IMT-2000 specification (Lee-Col. 1, lines 25-30).

Regarding Claim 6, Lee and Kim disclose the wireless device wherein the second modem processor is operative to perform a mobile originated (MO) call setup procedure defined by IS-2000 (**Lee-Col. 1, lines 25-30 and Col. 14, line 51-Col. 15, line 17**) as described above.

Lee and Kim fail to disclose wherein the message is an Origination Message sent to the wireless network.

Patel discloses the message is an Origination Message sent to the wireless network **[0030]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to request establishment of a traffic channel between a device in handoff between two different systems utilizing two different networks.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singh in view of Lee in further view of Kim.

Regarding Claim 17, Singh discloses a UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network (UTRAN) comprising: means for processing a pending call with a wireless device; means for sending a first message to the wireless device to perform a handoff to a radio access network (RAN); means for sending a second message to a UMTS mobile switching center (MSC) to request relocation of the wireless device to another MSC in the RAN; means for receiving an indication of a new call established for the wireless device with the RAN; and means for terminating the pending call with the wireless device **[0032]**, **[0033]** and **[0069]**-**[0071]**.

Singh fails to disclose wherein the radio access network is a cdma 2000; means for sending a search message carrying a list of frequencies to search for cells in the

second wireless network and means for receiving a search result comprising pilot acquisition determined for the list of frequencies and additional frequencies not included in the list of frequencies, wherein the search result further comprises each cell with which the wireless device acquired synchronization and timing based on the pilot acquisitions.

Lee discloses wherein the radio access network is a cdma 2000; means for sending a search message carrying a list of frequencies to search for cells in the second wireless network and means for receiving a search result comprising pilot acquisition determined for the list of frequencies, wherein the search result further comprises each cell with which the wireless device acquired synchronization and timing based on the pilot acquisitions (**Col. 1, lines 25-30 and Col. 13, lines 20-39**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network [Singh-0007] measuring the strengths of the pilot signals from the candidate cells in a short time (Lee-Col. 14, lines 38-41).

Singh and Lee fail to disclose additional frequencies not included in the list of frequencies.

Kim discloses additional frequencies not included in the list of frequencies **[0059]-[0062]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to allow for a mobile user to roam from one region to another where

different radio access technologies are covered allowing for calls to be maintained and set up on the existing network [Singh-0007] measuring the strengths of the pilot signals from the candidate cells in a short time (Lee-Col. 14, lines 38-41) for maintaining the continuity of the transmission traffic (Kim-[0003] and [0004]).

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantell Heiber whose telephone number is (571)272-0886. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on 571-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/S. H./
Examiner, Art Unit 2617
March 28, 2009

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617